



United States
Environmental Protection
Agency

Office of Public Affairs
Region 5
77 West Jackson Blvd
Chicago, IL 60604

Illinois Indiana
Michigan Minnesota
Ohio Wisconsin

135

PUBLIC COMMENT PERIOD

U.S. EPA will accept written comments on the Proposed Plan and Feasibility Study during a Public Comment Period:

Date: February 17 to March 20, 1995

PUBLIC MEETING

U.S. EPA will hold a public meeting to explain the Proposed Plan and all of the alternatives presented in the Feasibility Study. Oral and written comments will also be accepted at the meeting.

Date: Monday, March 6, 1995

Time: 7 p.m.

**Place: Granite City Township Hall
2060 Delmar Avenue
Granite City, Illinois**

PROPOSED PLAN NL INDUSTRIES/TARACORP SUPERFUND SITE

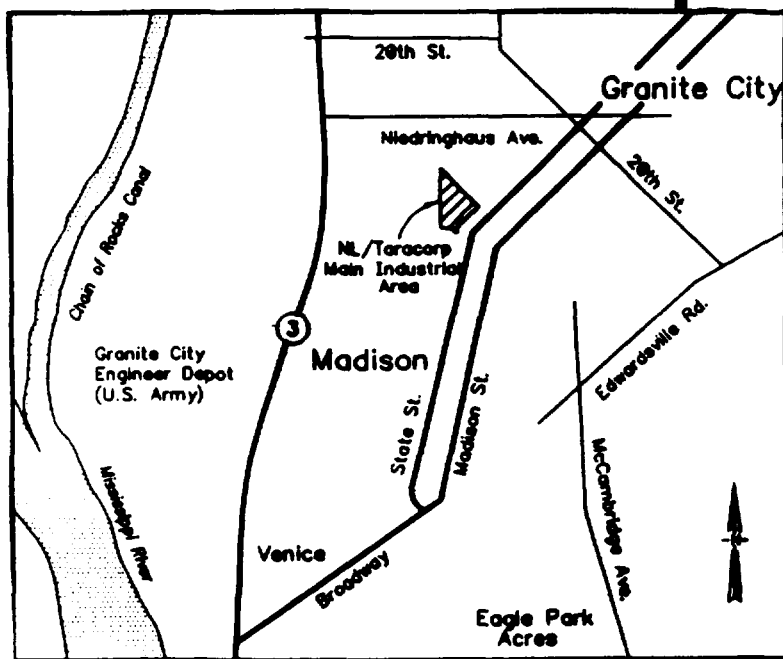
Granite City, Illinois
February 1995

INTRODUCTION

This Proposed Plan summarizes the cleanup alternatives that have been considered by the United States Environmental Protection Agency (U.S. EPA) for the NL Industries/Taracorp Superfund site in Granite City, Illinois (see figure below).¹ This Proposed Plan presents U.S. EPA's recommended cleanup remedies for the Taracorp piles, the main industrial area, the remaining remote fill areas, and the ground water. The Remedial Investigation (RI) and Feasibility Study (FS) reports, as well as any other pertinent documents in the Administrative Record and Information Repositories, should be consulted for in-depth details on the development and evaluation of the alternatives considered. The objectives of the RI and FS reports are to determine the extent of contamination at the site and to evaluate alternatives to address threats or potential threats posed by the site.

U.S. EPA is considering an amendment to certain portions of the 1990 Record of Decision (ROD) which detailed the cleanup to be done at this site. For this project, U.S. EPA divided the NL Industries/Taracorp site into three areas of concern: the Main Industrial Area, the Adjacent Residential Areas, and the Remote Fill Areas. These areas are described in detail on page 2.

Public input on the alternatives and the information that supports these alternatives is an important contribution to the cleanup remedy selection process. Based on new information or public comment, U.S. EPA may modify the recommended alternative or select another alternative presented in this plan and/or the second FS report addendum. The public is encouraged to review and comment on all technologies and alternatives considered for the NL Industries/Taracorp site.



1. Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requires publication of a notice and Proposed Plan for site remediation. The Proposed Plan must also be made available to the public for comment. This Proposed Plan is a summary of information contained in the Feasibility Study and Feasibility Study addenda for the NL Industries/Taracorp Site. Please consult the feasibility studies for more detailed information.

BACKGROUND

The NL Industries/Taracorp Site is located at 16th Street and Cleveland Boulevard in Granite City, Illinois. The approximately 16-acre site is located across the Mississippi River, two miles east of St. Louis, Missouri. The site facility was used for metal refining, fabricating, and related work beginning in 1903, when the facility was opened by Hoyt Metal. The facility was later sold and renamed United Lead. NL Industries bought United Lead in 1928 and operated the facility until 1979, when it was bought by Taracorp, Inc., whose operations included the manufacture of metal products. Facility operations included a secondary lead smelter used for purifying/reprocessing lead-containing scrap and used batteries.

In December 1982, the site was proposed for the National Priorities List (NPL), the U.S. EPA list of sites with serious hazardous waste problems. Sites on this list are studied and cleaned up by U.S. EPA or anyone who owned or operated the site or who generated or transported waste to the site. U.S. EPA refers to those people/companies/entities as potentially responsible parties (PRPs). The site was included on the NPL in 1986.

In May 1985, NL Industries, as former owner of the site, voluntarily entered into an Agreement and Administrative Order by Consent with U.S. EPA and the Illinois Environmental Protection Agency (IEPA). Under this legal agreement, NL Industries was required to initiate an RI/FS to study the hazardous waste problems at or near the site, and to determine ways to correct the problems. The RI/FS began in January 1987 and ended in March 1990. The RI results indicated that some possible health risks from the NL Industries/Taracorp site came from direct contact with and ingestion of contaminated soils and materials, and from breathing contaminated dust. In May 1993, a document called on Explanation of Significant Differences (ESD) was issued to allow the disposal of excavated remote fill material in an off-site landfill instead of the Taracorp site. Another ESD was issued in January 1994 to allow the disposal of excavated residential soil in an off-site landfill instead of the Taracorp site. Recent information has indicated that other health risks are associated with

lead and metals concentrations above the Maximum Contaminant Levels (MCLs) in some on- and off-site wells. MCLs are concentrations determined by federal regulations as specified in the Safe Drinking Water Act. To address this new information, U.S. EPA developed a second FS addendum. The NL Industries/Taracorp site was divided into three areas of concern where lead contamination may be a health threat to the community: the Main Industrial Area, the Adjacent Residential Areas, and the Remote Fill Areas.

Main Industrial Area: This area consists of approximately 30 acres which formerly contained the lead smelting facility (NL Industries/Taracorp), a slag pile¹ recycling operation [previously St. Louis Lead Recyclers (SLLR), now Trust 454], a trucking company (BV&G Transport), and a fuel oil distributor (Rich Oil). Two waste piles filled with lead wastes and materials from battery cases (the Taracorp pile and the SLLR pile) cover portions of this area, with a combined volume of approximately 91,000 cubic yards. The discovery of ground water contamination in excess of the applicable MCLs prompted U.S. EPA to reconsider the original cleanup plan for the Main Industrial Area.

Adjacent Residential Areas: These areas include approximately 500 acres within the cities of Granite City, Venice, and Madison, Illinois. Soils tested from these areas contained lead levels that could be a health threat to the community. Areas closest to the site have the highest levels of lead contamination, which are primarily due to airborne dust from the lead smelting operations.

Remote Fill Areas: These areas include approximately 30 locations in the Eagle Park Acres subdivision, where battery case materials containing lead were used as fill and paving material in low areas. The Remote Fill Areas also include several residences and most of the alleys in Venice Township (south and southeast of Madison), three areas north of Granite City (Missouri Avenue and Sand and Schaeffer Roads), four areas within Granite City, and two areas in Glen Carbon, Illinois. The cleanup plan for the Remote Fill Areas is being reconsidered due to the discovery of approximately 50 additional Remote Fill locations. U.S. EPA has already cleaned up approximately 20 of these locations.

1. Slag is the unusable metal leftover portion from a lead smelting furnace.

SUMMARY OF SITE RISKS

As part of the RI at the NL Industries/Taracorp site, NL Industries conducted Health Risk Assessments to determine if soil or ground water from the site could affect human health. While U.S. EPA does not agree with all of the findings, the assessments identified two exposure pathways at the site: 1) direct contact with and ingestion of contaminated waste materials and soils, and 2) inhalation of contaminated airborne dusts. Additionally, ground-water contamination levels exceed the MCLs established for the site. However, ground water south/southwest of the site is not known to be used for drinking-water purposes.

Based on this information, it was determined that cleanup alternatives considered should address the Taracorp pile; Area 1 battery case materials and soils; battery case materials at Eagle Park Acres, Venice Township alleys, and nearby communities; and ground water.

SUMMARY OF ALTERNATIVES

The FS identified and evaluated alternatives that could be used to address threats and/or potential threats posed by soil, contaminated materials, and ground water at the NL Industries/Taracorp site. These alternatives were combined into location-specific cleanup alternatives: Main Industrial Area, Remote Fill Areas, and Ground Water. The No-Action Alternative was also evaluated in the August 1989 FS and the January 1990 addendum. This alternative involves no deed restrictions or cleanup action for the contaminated areas. It would not effectively reduce the threats to human health and the environment. The inclusion of the No-Action Alternative is required by law at all Superfund sites to give U.S. EPA a basis for comparison.

Main Industrial Area

The alternatives evaluated for addressing the contaminated solid materials at the Main Industrial Area are:

Alternative M-A - Source Removal to On-Site Landfill

Estimated Cost: \$4.8 million

Estimated Construction Time Frame: 9 to 15 months

This alternative involves excavating the SLLR pile and combining the contents with the main Taracorp pile. The new section of the Taracorp pile would be constructed with a bottom liner (a 3-foot layer of compacted clay). The combined pile would be graded and capped with a multi-layer cap. The excavated area would then be restored with clean soil and capped with sod or asphalt. Deed restrictions would prevent the public from direct contact with the pile. A monitoring program would indicate what concentrations of contaminants are moving off site, and long-term air monitoring would be required. For the remaining unpaved parts of the Main Industrial Area, soil with a total lead content in excess of 1,000 parts per million (ppm) and soil containing hard rubber battery casing material would be excavated and added to the new lined section of the main Taracorp pile. The excavated area would be restored. This is the cleanup plan that was selected in the 1990 ROD.

Alternative M-B - Source Removal to On-Site Landfill and On-Site Treatment of Material Characterized as Hazardous Waste

Estimated Cost: \$29 million

Estimated Construction Time Frame: 12 to 18 months

This alternative would involve excavating the Taracorp and SLLR piles, stabilizing the excavated material on site, and disposing of the materials into a newly constructed on-site landfill. The material from the unpaved parts of the Main Industrial Area (as described in Alternative M-A) would also be disposed of in the new on-site landfill.

Alternative M-C1 - Source Removal to Off-Site Landfill and Off-Site Treatment of Hazardous Waste

Estimated Cost: \$64.8 million

Estimated Construction Time Frame: 6 to 12 months

This alternative would include excavating the Taracorp and SLLR piles and removing the contents to a hazardous waste treatment, storage, and disposal (TSD) facility. Material from the unpaved site areas would be excavated and removed to a TSD facility for stabilization, if necessary, and disposed of at a TSD facility or special waste landfill.

Alternative M-C2 - Source Removal to Off-Site Landfill and On-Site Treatment of Hazardous Waste

Estimated Cost: \$34.6 million

Estimated Construction Time Frame: 10 to 16 months

This alternative is similar to Alternative M-C1; however, the contents of the Taracorp and SLLR piles would be treated on site. Materials from unpaved parts of the Main Industrial Area (see Alternative M-C1) would be excavated and treated on site before being transported to a special waste landfill.

Alternative M-D - Source Removal with On-Site Sorting and Treatment; Off-Site Recycling; and On- or Off-Site Disposal

Estimated Cost: \$87.4 million

Estimated Construction Time Frame: 11 to 17 months

For this alternative, the contents of the Taracorp and SLLR piles would be excavated. If an approved recycling facility is identified, the waste pile material could be transported to the facility without sorting or treating. If sorting is necessary, any slag material would be shipped to an approved recycling facility for lead recovery. Any hard rubber and plastic battery casing material excavated would receive a wash treatment on site, and it would be sent off site for use as secondary fuel if a suitable user is identified. If the treated hard rubber and plastic battery casing material cannot pass state and federal disposal requirements, or if a suitable user or recycler cannot be found, this material and any remaining unrecyclable material would need to be stabilized and then disposed of at an on- or off-site special waste landfill.

For the unpaved parts of the Main Industrial Area, fill containing battery casing material with concentrations of total lead greater than 1,000 ppm will be excavated and sorted on site. Slag material, hard rubber, and plastic would be shipped to an approved recycling facility. If an approved facility is not identified, the hard rubber and plastic battery casing material would receive a wash treatment on site prior to shipment to an industrial furnace (hard rubber) or recycling facility (plastic). If these treated materials do not meet federal and state cleanup requirements,

they would undergo a process similar to that used for the Taracorp and SLLR pile materials.

Based on current information, U.S. EPA's recommended alternative is M-A.

Remote Fill Areas

The alternatives evaluated for addressing contaminated solid materials at the Remote Fill Areas are:

Alternative RF-A - Removing Remote Fill from Residential Areas; Treating Remote Fill Characterized as Hazardous; and Capping Remote Fill in Alleys and Driveways

Estimated Cost: \$1.3 to \$1.4 million

Estimated Construction Time Frame: 6 to 8 months

Remote fill in residential areas containing hard rubber battery casing material would be segregated. Hazardous material would be stabilized on- or off-site, and disposed of into an off-site landfill. Non-hazardous material would be taken directly to a landfill for disposal. Excavated areas would be restored with soil or fill and covered with sod, rock, asphalt, or concrete, depending on the usage of the areas. Fill in alleys or driveways would be covered with asphalt caps to eliminate potential exposure to the public. Small amounts of soil are expected to be removed from these areas, treated (if hazardous), and disposed of in an off-site landfill.

Alternative RF-B - Removing Remote Fill from All Remote Fill Areas to On- or Off-Site Landfill and Treating Remote Fill Characterized as Hazardous

Estimated Cost: \$2 to \$2.6 million

Estimated Construction Time Frame: 9 to 12 months

This alternative is similar to RF-A; however, all Remote Fill Areas would receive the same cleanup remedy as the residential areas. Stabilized material from the excavation would be disposed of at a special waste disposal landfill.

Based on current information, U.S. EPA's recommended alternative is RF-A.

Ground water

The alternatives evaluated for addressing the ground-water contamination are:

Alternative G-A - *Monitoring Natural Attenuation*

Estimated Cost: \$940,000

Estimated Construction Time Frame: 20 to 30 days

Alternative G-A allows the natural reduction of contaminant concentrations in ground water to established cleanup levels. A monitoring program would indicate if the contaminated ground water changes flow direction or characteristics. Additional monitoring wells would be installed in the Main Industrial Area downgradient (downstream) of the existing well to identify the extent of contamination. Monitoring wells would also be installed at the Remote Fill Areas.

Alternative G-B - *Ground-Water Containment on the Main Industrial Area by Pumping and Disposing into the Local Publicly Owned Treatment Works (POTW); Monitoring and Natural Attenuation in the Remote Fill Areas*

Estimated Cost: \$3 million

Estimated Construction Time Frame: 2 to 4 months

This alternative would involve installing a series of on-site extraction wells to control off-site ground-water flow and to contain ground-water contamination. Water produced from these extraction wells would be treated on site, if necessary, and would be disposed of into the local POTW to be treated as part of the daily waste stream. Additional monitoring wells would be required to identify the extent of contamination. These wells would be installed downgradient from the existing monitoring wells where high lead or cadmium levels were previously detected. The Remote Fill Areas would be treated as described in Alternative G-A.

Alternative G-C - *Ground-Water Containment on the Main Industrial Area Through a Combination of Installing a Slurry Wall and Pumping and Disposing into the Local POTW; Monitoring and Natural Attenuation in the Remote Fill Areas*

Estimated Cost: \$18.1 million

Estimated Construction Time Frame: 6 to 8 months

This alternative would involve installing a slurry wall on the perimeter of the Main Industrial Area to prevent ground water from moving off site. A slurry wall is a barrier wall of clay and other materials constructed beneath the ground surface to prevent contaminant flow. At least one extraction well would also be installed to prevent off-site ground-water flow. Water produced from

the extraction wells would be treated on site, if necessary, and would be disposed of into the local POTW to be treated as part of the daily waste stream. Monitoring wells would also be installed at the Remote Fill Areas.

Based on current information, U.S. EPA's recommended alternative is G-B.

EVALUATING THE ALTERNATIVES

U.S. EPA used the nine criteria described below to evaluate each alternative. Evaluation tables comparing each alternative against these criteria are provided on pages 6 and 7. The evaluation criteria consisted of:

1. **Overall protection of human health and the environment** determines whether an alternative eliminates, reduces, or controls threats to public health and the environment through institutional controls, engineering controls, or treatment.
2. **Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)** evaluates whether the alternative meets federal and state environmental statutes, regulations, and other requirements that pertain to the site or whether a waiver is justified.
3. **Long-term effectiveness and permanence** considers the ability of an alternative to maintain protection of human health and the environment over time, and the reliability of such protection.
4. **Reduction of contaminant toxicity, mobility, or volume through treatment** evaluates an alternative's use of treatment to reduce the harmful effects of principal contaminants, their ability to move in the environment, and the amount of contamination present.
5. **Short-term effectiveness** considers the length of time needed to implement an alternative and the risks the alternative poses to workers, residents, and the environment during implementation.
6. **Implementability** considers the technical and administrative feasibility of implementing the alternative, such as relative availability of goods and services.
7. **Cost** includes estimated capital and operation and maintenance costs, as well as present worth cost. Present worth cost is the total cost of an alternative over time in terms of today's dollars.
8. **State acceptance** considers whether the state agrees with U.S. EPA's analyses and recommendations of the RI/FS and the Proposed Plan.
9. **Community acceptance** will be addressed in the ROD. The ROD will include a responsiveness summary that presents public comments and U.S. EPA responses to those comments. Acceptance of the recommended alternative will be evaluated after the public comment period.

DUST PROVISIONS

Lead from the smelter and residential soil may enter homes in the form of lead dust. This dust may also include lead from other sources such as lead-based paint. To address indoor lead dust, U.S. EPA will make available a High-Efficiency Particulate Air (HEPA) vacuum to citizens living in the cleanup zone who would like to effectively clean up the fine lead dust inside their homes. U.S. EPA will provide details later this year.

U.S. EPA is also considering appropriate actions to control airborne lead dust from unpaved parking lots near the Taracorp pile. Such actions could include excavation/restoration, paving, or other dust-suppressing measures.

THE NEXT STEP

U.S. EPA will consider public comments received during the Public Comment Period before choosing a final action for the site. The final action may be described in a ROD amendment.

EVALUATION TABLES

The tables below and on page 7 compare the alternatives for each area. With respect to the Main Industrial Areas (Table 1), Alternative M-A is recommended. With respect to the Remote Fill Areas (Table 2), Alternative RF-A is recommended. With respect to Ground Water (Table 3), Alternative G-B is recommended.

TABLE 1 - Main Industrial Area

Evaluation Criteria	Alternative M-A	Alternative M-B	Alternative M-C1	Alternative M-C2	Alternative M-D
1. Overall Protection of Health & Environment	■	■	■	■	■
2. Compliance with ARARs	■	■	■	■	■
3. Long-Term Effectiveness and Permanence	■	■	■	■	■
4. Reduction of Toxicity, Mobility, or Volume through Treatment	❖	■	■	■	■
5. Short-Term Effectiveness	❖	❖	❖	❖	❖
6. Implementability	■	■	■	■	❖
7. Cost	\$ 4.8 million	\$ 29 million	\$ 64.8 million	\$ 34.6 million	\$ 87.4 million ¹
8. State Agency Acceptance	State Acceptance of the recommended alternative will be evaluated after the Public Comment Period.				
9. Community Acceptance	Community Acceptance of the recommended alternative will be evaluated after the Public Comment Period.				

¹This cost will be lower if contaminated solid materials can be processed legally in an approved recycling facility.

■ - Fully meets criteria ❖ - Partially meets criteria

TABLE 2 - Remote Fill Areas

Evaluation Criteria	Alternative RF-A	Alternative RF-B
1. Overall Protection of Health & Environment	■	■
2. Compliance with ARARs	■	■
3. Long-Term Effectiveness and Permanence	■	■
4. Reduction of Toxicity, Mobility, or Volume through Treatment	■	■
5. Short-Term Effectiveness	■	■
6. Implementability	■	■
7. Cost	\$ 1.3 to 1.4 million	\$ 2 to 2.6 million
8. State Agency Acceptance	State Acceptance of the recommended alternative will be evaluated after the Public Comment Period.	
9. Community Acceptance		

TABLE 3 - Ground Water

Evaluation Criteria	Alternative G-A	Alternative G-B	Alternative G-C
1. Overall Protection of Health & Environment	❖	❖	❖
2. Compliance with ARARs	□ ¹	■	■
3. Long-Term Effectiveness and Permanence	❖	■	■
4. Reduction of Toxicity, Mobility, or Volume through Treatment	❖	❖	❖
5. Short-Term Effectiveness	■	❖	❖
6. Implementability	■	■	■
7. Cost	\$ 940,000	\$ 3 million	\$ 18.1 million
8. State Agency Acceptance	State Acceptance of the recommended alternative will be evaluated after the Public Comment Period.		
9. Community Acceptance			

¹An ARARs waiver would be needed to implement Alternative G-A.

■ - Fully meets criteria ❖ - Partially meets criteria □ - Does not meet criteria.

ADDITIONAL INFORMATION

Anyone interested in learning more about the investigation, the Proposed Plan for controlling contamination at the NL Industries/Taracorp site, or the Superfund process is encouraged to review the Information Repository maintained for the NL Industries/Taracorp site. The Repository contains copies of the RI Work Plan, the RI Report, the FS, the FS Addenda, the Community Relations Plan, the Proposed Plan, the March 1990 ROD, and other materials related to the site. The Information Repository is located at:

Granite City Public Library
2001 Delmar Avenue
Granite City, IL

An Administrative Record file, which contains the information upon which the selection of the cleanup remedy will be based, has also been established at the public library and the U.S. EPA Region 5 office in Chicago.

For further information on the NL Industries/Taracorp site, please contact:

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USE THIS SPACE TO WRITE YOUR COMMENTS

Your input on the recommended cleanup plan for the NL Industries Taracorp site is important to U.S. EPA. Comments provided by the public are valuable in helping U.S. EPA select a final remedy for the site.

You may use the space below to write your comments, then fold and mail. Comments must be postmarked by March 20, 1995. If you have questions about the Public Comment Period, please contact Susan Pastor at (312) 353-1325 or through U.S. EPA's toll-free number at 1-800-621-8431.

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Name _____

Address _____

City _____

State _____ Zip _____

**NL INDUSTRIES/TARACORP SITE
PUBLIC COMMENT SHEET**

Name _____
Address _____
City _____
State _____ Zip _____

**Place
Stamp
Here**

Susan Pastor
Community Involvement Coordinator
Office of Public Affairs (P-19J)
U.S. EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604